

HEREDITARY BLINDNESS

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kind and length of course one plays and to what extent it taxes one's endurance. Not unmindful of the many tragic disasters and the ill-health induced by over-exertion in this fascinating game, we feel compelled to warn the golfer to play the game safely, within his individual capacity.—*Reprint from Med. Times and Long Island Med. Journal.*

## HEREDITARY BLINDNESS

The August 1932 issue of the *Journal of Heredity* contains a very interesting article on hereditary blindness by Lewis H. Cariss. He states "The question of the reduction or elimination of the number of persons blind from heredity is perhaps the most perplexing problem of the movement for the prevention of blindness—much more complicated than the reduction of blindness from such other causes as trachoma, accidents, ophthalmia, neonatorum, etc. As a matter of fact, such activities as society may undertake to bring about a reduction of blindness from this cause must of necessity be a part of a larger eugenics program".

Mr. Cariss, after giving the reduction in the number of blind from inheritable causes its proper setting in the whole problem of heredity insofar as that problem affects the future welfare of the human race, gives particular consideration to each of the types of hereditary blindness, reminds us of the difference between congenital and hereditary blindness, warns against the still common assumption that an acquired physical characteristic can be inherited, and then presents the following table:

**TABLE I.—Incidence of Blindness in the Children of the Blind\***

Disease	Families	Total Affected Children	Normal Children	% Affected Children
I. Albinism .....	13	60	23	37
II. Aniridia and Colomba Iridis .....	72	199	147	52 73.8
III. Anophthal and Microphthal .....	48	117	87	30 74.4
IV. Atrophy of Optic Nerve .....	150	506	312	194 61.6
V. Cataract .....	404	1446	836	610 57.8
VI. Ectopia Lentis .....	64	212	155	57 73.1
VII. Family Degen. of the Cornea .....	32	114	62	52 54.4
VIII. Glaucoma .....	58	194	109	85 56.2
IX. Megalophthalmus .....	8	28	21	7
X. Nystagmus .....	30	107	66	41 61.7
XI. Ophthalmoplegia and Ptosis .....	39	145	94	51 64.8
XII. Retinitis Pigmentosa ..	286	1027	611	416 59.5
Total—All Diseases ..	1204	4155	2523	1632 60 8

\*Based on table appearing on page 38 of "The Marriage of the Blind from the Standpoint of a Physician," by Dr. C. Loeb.



ly important. If due to angina it is felt beneath or close to the sternal borders in the great majority of cases, Unfortunately, the pain in some cases of angina is felt in the epigastrium and sometimes in the region of the shoulder or back, in the arms, or possibly in the neck region. To make the diagnosis more difficult and misleading, it may only be felt in the right shoulder, or the right arm region.

The pain or discomfort may remain localized, or, as in the majority of cases, it radiates to either the shoulder, neck, or down the arm to the fingers [usually the ring and little fingers]. In 75 per cent of the cases the pain is felt in the left extremity.

An attack of discomfort or pain due to angina pectoris seldom comes after prolonged rest. Exertion is the common exciting factor, although excitement may be a predominating cause. It not uncommonly occurs during the period of relaxation which follows overexertion and overtire. It is not uncommon to read an account of a man who has undergone some unusual, or prolonged physical exertion, followed by a more or less heavy meal and several hours later by sudden death. So golf mortality is something that cannot be neglected.

We have found that the influence of emotion and excessive use of tobacco can cause pain or discomfort in the region of the heart and the laity, particularly, are inclined to give little thought to these as a cause for their "ill feelings."

Obese individuals, especially those with large and protuberant abdomens, seek exercise for loss of weight, and often turn to golf. With displacement of the diaphragm upwards the heart rotates on its long axis, and is displaced upwards and to the left. By this change of position, the larger blood vessels at the base of the heart tend to become narrowed or kinked. This lessens the blood supply. The heart muscle is supplied by coronary arteries which fill in diastole. Exertion and excitement cause an increase of the heart rate, which shortens the diastolic phase of the cardiac cycle, lessening the amount of blood supply. It is more apt to affect those individuals who already have more or less narrowed or sclerotic blood vessels, adding greatly to the lessened amount of blood supply, even in the absence of exertion or excitement.

Golf is a great game; so is life. Both require concentration and relaxation. Keep the head down in Golf and keep the heart up in Life. No two individuals are exactly alike; therefore one may play the game on as long and as hard a course as one likes, but watch out for the danger signals if approaching or past middle life. At the first signs of danger, shorten the game or change the course. There is quite as much competition, skill and companionship on the short course as on the longer one; and often more of real comfort and health. Nine holes on a long, hard course may be too much; eighteen or more on a flat, easy course may be safe for the same individual.

Some have been advised to give up golf, but, before that is decided, it is only fair that one's physician should be told what



